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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,482	01/09/2004	Kil Young Lee	1594.1343	6886

21171 7590 01/11/2006

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EXAMINER
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NGUYEN, TUYEN T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/753,482

Applicant(s)

LEE ET AL.

Examiner

TUYEN T. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 4 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-7, 9, 15 and 18-19, are rejected under 35 U.S.C. 102(b) as being anticipated by Chapel [US 4,812,789].

Chapel discloses a high voltage transformer [figures 1-6] comprising:

- a magnetic core structure including laminated EI core elements [5, 6];
- magnetic shunts [16, 17];
- a low primary winding [7] wound about the core structure with winding ends connected to terminals [8, 9 or 80, 90]
- a high voltage secondary winding [10] wound about the core structure with winding end connected to output terminal [12];
- a heating winding [13] wound about the core structure with winding ends connected to terminals [14, 15];
- output terminal support [54, figure 7] formed of insulation material;
- at one insulation structure [41] having insulation members [35, 36, 37] disposed between the output terminal and the magnetic core, wherein the insulation members in the form of a plate, and additional insulation members [figure 6] disposed between the secondary winding

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and the heating winding, wherein at least one of the insulation members vertically positioned and fixed between the output terminal and the magnetic core; and

- additional insulation structure [18] having insulation members [19, 20, 21].

Regarding claim 6, Chapel inherently discloses one the insulation members perpendicular to the winding direction of the windings.

Regarding claim 7, Chapel discloses at least one of the insulation members interposed between the terminal support and the core.

Regarding claim 9, Chapel inherently discloses that at least one of the insulation member include a resin.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapel in view of Cho [US 5,973,307].

Chapel discloses the instant claimed invention except for the specific insulation structure and material.

Cho discloses high voltage transformer [figure 3] comprising:

- a magnetic core including laminated EI core elements [14b, 14a];
- a primary coil [11];

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- a secondary coil [12];
- a heating coil [13];
- thin insulation structure [17, 17', 18, 18', 19, 19', 20, 20', 21, 21'] disposed between the coils and the core structure.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the thin insulation design of Cho in Chapel for the purpose of reducing size of the device.

The specific paper use for the insulation structure would have been an obvious design consideration for the purpose of reducing cost and manufacturing.

Paper is a known insulation material for use in high voltage transformer.

#### ***Allowable Subject Matter***

Claims 4 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments filed 10/26/05 have been fully considered but they are not persuasive.

Applicant argues that Chapel fails to disclose the insulation member vertically positioned and fixed between the output terminal and the core at a predetermined distance away from the core.

The examiner disagrees. Chapel discloses at least one insulation member vertically positioned and fixed between the output terminal [90] and the magnetic core [see figure 6].

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TTN*

*Tunglu Nguyen*